Land Remote Sensing Program
Science Fair

U.S. Geological Survey Headquarters
Reston Virginia

April 12-13, 2005

April 11, 2005 Invitees travel to Reston

April 12, 2005

Welcoming Remarks/Keynotes/Invited Speakers (includes time for questions)

8:45 **J. Feuquay**, Program Coordinator, Land Remote Sensing, Welcome/Logistics
9:00 **Chip Groat**, Director, USGS, – Keynote
9:30 **Barb Ryan**, Associate Director, Geography Discipline, –Suggested Title: Geography's role in Land Remote Sensing
9:50 **Carol Aten**, Chief, Administrative Policy and Services
10:10 **J. Feuquay** – The LRS Program and Mission

10:25 **Break**

Invited Speakers from other programs.

10:40 Ann Frandorf, Chief Scientist, Geospatial Information Office
11:00 Matt Larsen, Chief Scientist, Water Discipline
11:20 Robert Szaro, Chief Scientist, Biology Discipline
11:40 Linda Gundersen, Chief Scientist, Geology Discipline

12:00-13:00 Lunch

Invited Speakers from Geography Program

13:00 Doug Muchoney, Program Coordinator, Geographic Analysis and Monitoring
13:20 Carl Shapiro, Program Coordinator, Science Impacts
13:40 Overview of USGS LRS Research and Application Element in the FY05 LRS Program - **Carl Markon**

Selected LRS Based Presentations

13:45 InSAR Monitoring of Earthquake, Volcano, and Landslide Processes - **Zhong Lu**
14:15 A Dynamic Approach to Mapping and Predicting Urban Growth Impacts by Modeling Imperviousness – **George Xian**
14:45 Landscapes of Diseases – **S. Guptil**

15:15 **Break**

15:30 Hydrologic Derivatives from SRTM and LIDAR – **KrisVerdin**
16:00 Phenological Trends – **Brad Reed**
16:30 Lidar and Multispectral Imagery Exploitation in Support of the Mancos Shale Landscapes Project – **J. Kosovich**
17:00 NCAP- Results from Internal Review – **D. Kirtland**
17:30 Closing Remarks/Task for Tomorrow – **J. Feuquay**

18:00 -20:00 PM Poster Session (Wine and Cheese)
21:00 – 22:00 Question and Answer for Poster Authors

Posters to be set up at Noon during Lunch and between 17:30 and 18:00 and should be no larger than 3 X 5 feet

Natural and Anthropogenic Hazards – Preparation, Response, and Mitigation
Development of RADAR Remote Sensing Technologies……**Zhong Lu**
InSAR Studies of Coastal Regions……...**Zhong Lu**
Deformation and Stress……..**Tim Masterlark**
Drought Monitoring with Remote Sensing Data……**Jess Brown**
Wildland Fire Data Ordering System.....**E. Lile**
Homeland Security……...……**S. Durst**

Sensor Technology and Characterization Research
Determining Soil Water Content from Remotely Sensed Data……. **E.Lynn Usery**
GPS-aided Inertial Technology and Navigation-based Photogrammetry for Near Real-time Hazards Mapping the Southern San Andreas Fault……..**Sanchez /Hudnut**
Sharpening and restoration of ALI data to improve spatial resolution of unmixed spectral data……**G. Lemeshewsky**
LIDAR analysis of Mt. St. Helens……..…**V. Queija**
Federal Agency Digital Data Characterizations……...….**Greg Stensaas**
Characterization and Validation of Ortho-photo imagery…….……**G. Lee**
Rapid Response, Low Cost Airborne Digital Imaging System……
…….**D. Tucker, P. Chavez, and R. Bogel**

Land Characterization
Agricultural Landscape Characterization using Landsat 7 SLC-off Imagery…….**Susan Maxwell**
Regional characterization of woody vegetation structural and biophysical parameters through integration of 3-D scene model, multiangle and multispectral remotely sensed data and in-situ measurements……**Zhiliang Zhu**
A Dynamic Approach to Mapping and Predicting Urban Growth Impacts by Modeling Imperviousness Variations……...**George Xian**
Development of multi-sensor applications for landscape and regional quantification of climate change impacts and carbon dynamics……..**Bruce Wylie**

Biodiversity Characterization and Dynamics of North and Central America using MODIS 500m Data, Geo-spatial Technology, and Climate Modeling……**Chandra Giri**
Airborne Hyperspectral Imagery Analysis to Predict Soil Suitability for Application of Coalbed Methane Produced Water, Powder River Basin, Montana……..……**J. Mcbeth**
Investigating and Modeling Landscape Vulnerability to Water Erosion and it's Impact to Coral Reefs, Hawaii……..**P. Chavez, M. Velasco, J. Isbrecht, and R. Bogle**
Ground and remote sensed data analysis for hydrologic modeling and ecosystem restoration monitoring……...……**John Jones**
History of land use change and linkages to water quality measures in the Lake Tahoe Basin……..…….**C. Rauman**
Innovative Approaches to Analysis of Lidar Data for *The National Map*…...**Jason Stoker**
Evaluate the Vertical Accuracies of Direct Geo-referenced LIDAR Elevation Data…….. **Sanchez**
Advanced Technologies for High Resolution Mapping / Invasive Species and Fire Fuels……..… **J. Stefanacci and S. Sitt**

Other LRS Related Topics

Landsat New Products……...**Jim Lacasse**
Land Remote Sensing Archive and Dissemination……**Rich McKinney**
Historical Applications of Digitized Aerial Photography……..……**Randy Mckinley**
Commercial Remote Sensing – What it can do for you……..……**Jenn Willems**
CRSDC……...……**Mike Duncan**
America View/ GloViz……...……**Karen Zanter**
Low Cost System Architecture for Archiving Remotely Sensed Data …...**Tom Kalvelage**
NCAP Science Support……..….**S. Stitt and M. Fahey**
Emergency Response……...…**Brenda Jones**

April 13, 2005

Welcome/Instructions/Breakouts

8:30 C. Markon - Schedule for the day
8:40 B. Quirk – Review of previous day
8:55 J. Feuquay – Charges of the Day: Breakouts (pre-defined based on attendee list)
9:00 Breakout Session 1 (four different groups); Questions to Discuss:

1) Do the current activities of the LRS program address the important current issues?
    a. What is LRS not doing that it should be doing?
    b. What is LRS doing that it should not be doing?
2) What is the best way to coordinate the current activities within the LRS program?

10:20 Break

10:40 Group Reports: Session 1
13:30 Round-table discussion

12:00 Lunch

13:00 Breakout Session 2 (four different groups); Questions to Discuss:

1) What are the needs of other disciplines/agencies
2) How can the LRS program best serve the other disciplines/agencies?
3) What are the major topical areas that LRS research should focus on in the future?

13:45 Group Reports: Session 2
14:15 Round-table discussion

14:30 Break

15:10 Highlights of Group Reports
15:30 J. Feuquay: summary words of wisdom and future direction.
16:00 Adjourn